CHAPTER 2

Nigeria's Spatial Economy

Introduction[1]

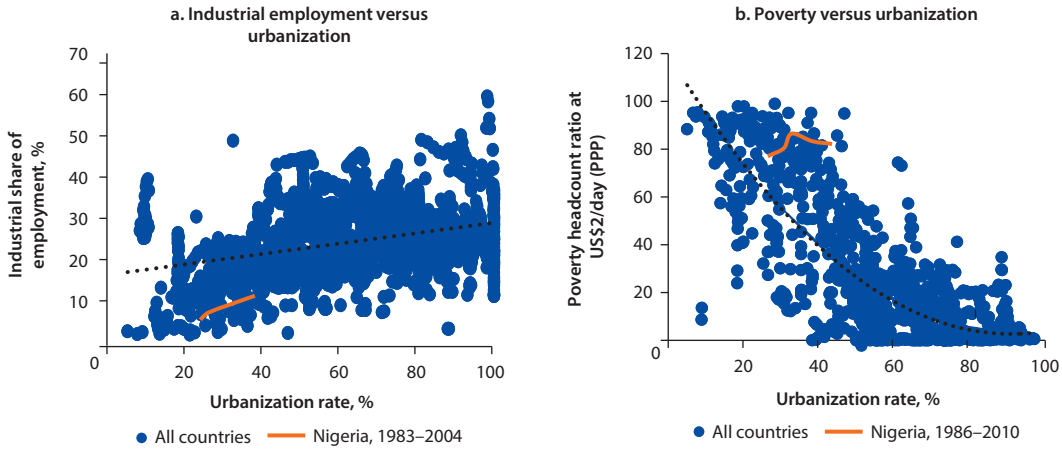
Urbanization generally coincides with structural transformation and poverty reduction, but these relationships have not held in Nigeria (figure 2.1) Strong economic growth over the last decade has not translated into meaningful improvements in living standards for the majority of Nigerians. A key reason for this outcome is that the urban economy has not created sufficient jobs. The limited growth of job opportunities is attributable to several interrelated factors:

- *The sectoral distribution of jobs.* Fast-growing sectors are capital-intensive and use little labor, and labor-intensive industries feature low productivity and slow growth.
- *Informal firms struggling to enhance productivity.* Informal firms are less likely to grow and to take advantage of urban economies of scale and specialization. Limited property rights and access to land and the formal legal system reduce incentives to invest in physical and human capital, reducing productivity and slowing growth.
- *A poor business environment*. Businesses face unreliable electricity supplies, poor transportation, and congestion due to insufficient road maintenance, high interest rates, precarious availability of finance, and red tape. These barriers hurt business development across sectors, but they have particularly pernicious effects on manufacturing firms.
- *Market fragmentation*. "Thick" borders between cities increase production costs in the tradable sector and prevent firms from expanding beyond local markets, reducing the potential for firm clustering and having agglomeration and localization effects.

Growth and Employment in the National Economy

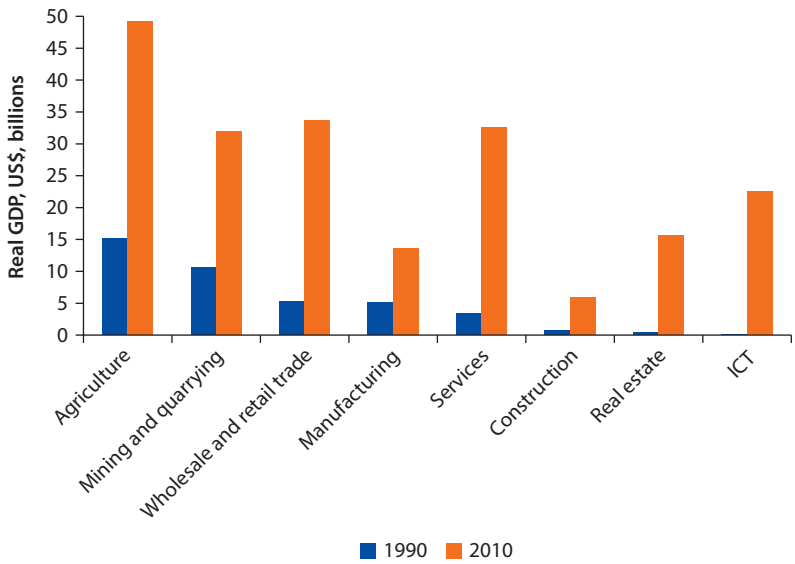
After two decades of economic stagnation, Nigeria in the past 10 years has been one of the fastest growing countries in Sub-Saharan Africa, with gross domestic product (GDP) growth exceeding 7 percent per year. A recent revision in the

Figure 2.1 Urbanization, Structural Transformation, and Poverty Reduction



Sources: World Bank, World Development Indicators; World Bank staff calculations.
Note: PPP = purchasing power parity.

Figure 2.2 Real GDP by Sector, 1990–2010



Source: National Bureau of Statistics data, various years.
Note: GDP = gross domestic product; ICT = information and communication technology.

calculation of Nigeria's GDP shows that, with a gross national product of US$509 billion in 2013, the country has the largest economy in Africa and the 26th largest in the world.

Nigeria's economy has also diversified over the past two decades (figure 2.2). All sectors of the economy have grown in real terms since 1990, and many have

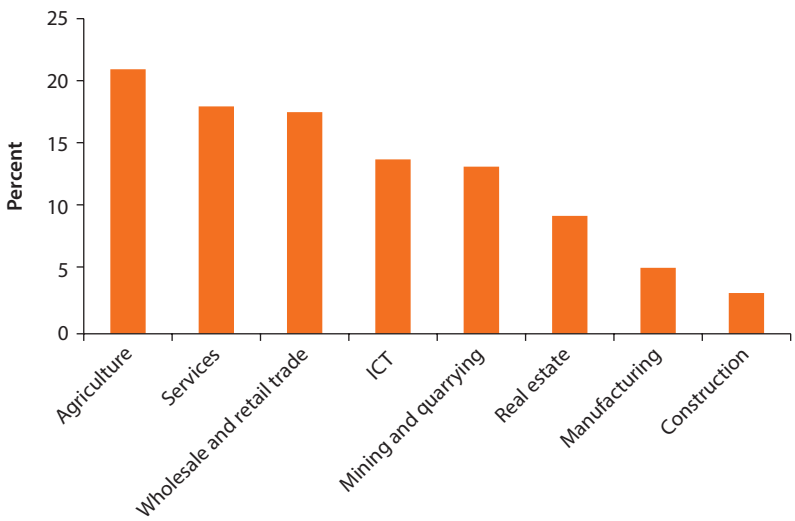
emerged from negligible levels, namely information and communication technology (ICT), real estate, construction, and services—all predominantly urban sectors of the economy. As a result of this rebalancing, the share of the agriculture and oil and gas sectors fell from 60 percent of GDP in 1990 to 40 percent in 2010. This development is good news because it reflects initial moves away from commodity dependency.

GDP growth over the past two decades was not as dominated by primary products and resources as before, and this again shows signs the economy is moving away from commodity dependence. Over one-third of GDP growth during 1990–2010 was driven by services growth (18 percent); wholesale and retail trade sectors (17 percent); and 26 percent by the ICT, real estate, and construction sectors (14, 9, and 3 percent, respectively) (figure 2.3). The growth of these noncommodity sectors is testament to the ability of predominantly urban entrepreneurs, investors, and workers to overcome endemic urban inefficiencies and governance failures by starting and growing business in cities.

Nigeria's industrial structure has experienced some rebalancing following a significant reduction in dependence on natural resources over the past two decades. Although the agriculture and mining and quarrying (mainly oil and gas) sectors still contributed 40 percent of GDP in 2010, their share has shrunk considerably from 37 percent in 1990 to 24 percent in 2010 for agriculture, and from 26 percent to 16 percent for oil and gas (figure 2.4).

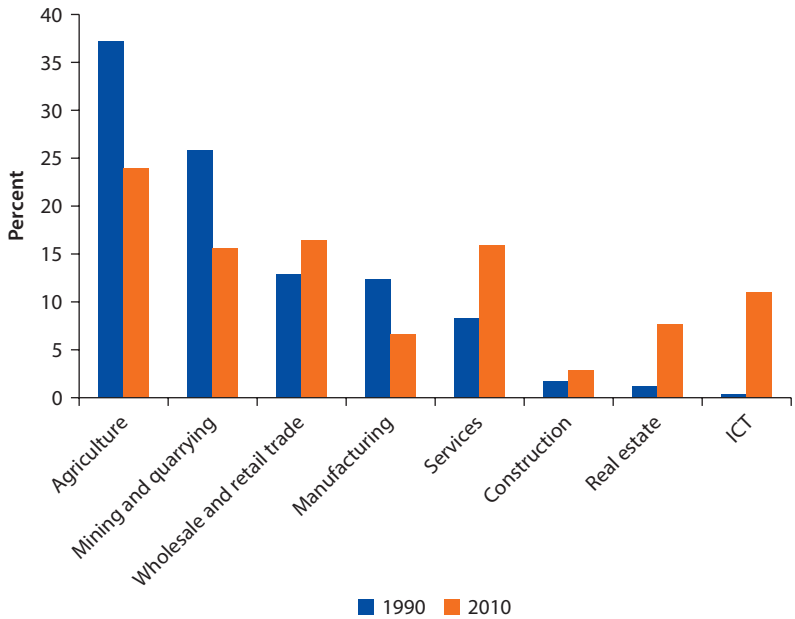
High-end services related to the oil and gas sector and their multiplier effects drove a substantial share of growth. Just over 6 percent of the growth

Figure 2.3 Sectoral Contribution to GDP Growth, 1990–2010



Sources: National Bureau of Statistics data, various years; World Bank staff calculations.
Note: GDP = gross domestic product; ICT = information and communication technology.

Figure 2.4 Sectoral Breakdown of GDP by Broad Industries, 1990 and 2010



Sources: National Bureau of Statistics, various years; World Bank staff calculations.
Note: GDP = gross domestic product; ICT = information and communication technology.

in output from 1990 to 2010 was driven by the highly productive (a) finance and insurance and (b) professional, scientific, and technical services industries, which to a significant extent offer business services to the oil and gas sector. Multiplier effects, while difficult to measure precisely, are evident in the robust growth of the real estate and construction sectors, and the related impact of the spending of the consuming urban middle class with further multiplier effects in wholesale and retail, ICT, and other services subsectors.

The greater share of growth, however, was driven by non-oil-related sectors of the economy. The impact of the oil and gas sector, while encouraging with its diversification into business services, should not be exaggerated. This is because economic growth over the past two decades was predominantly driven by non-oil related sectors, such as ICT, agriculture, wholesale and retail, and services other than (a) professional, scientific, and technical and (b) finance and insurance. These no doubt have also had positive multiplier effects on the real estate and construction sectors.

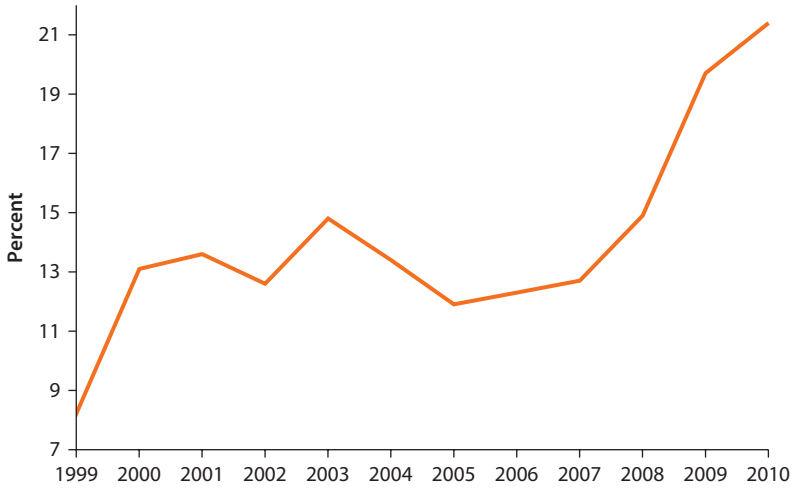
The manufacturing sector has made a negligible contribution to growth, contributing just 5 percent to GDP growth from 1990 to 2010, little more than one-third of that of the oil and gas sector and less than one-quarter of that of agriculture. Moreover, manufacturing's share of output declined from 12 percent in 1990 to 7 percent in 2010.

Despite impressive growth and diversification, Nigeria's economy has failed to translate the growth in output into a reduction in unemployment in the form of an increase in formal employment, and this failure has resulted in significant underemployment. According to National Bureau of Statistics data, unemployment rose from 8 percent in 1999 to 21 percent in 2010 (figure 2.5). Nigeria's actual unemployment rate according to the International Labour Organization definition, however, is likely to be significantly lower than the official estimate, which requires 40 or more hours of work a week to be considered employed. The *Nigeria Jobs Report* (World Bank 2015) estimates unemployment at 6 percent, with a definition of the unemployment rate as the share of the active population that is not employed and is looking for work. The problem then is best interpreted as underemployment, particularly for those working in the informal sector engaged in low-productivity and low-paying occupations.

Not surprisingly, jobs are a central issue in the public debate in Nigeria, particularly for youth (see box 2.1). Nigeria is an outlier in its failure to translate per capita GDP growth into a reduction in unemployment (figure 2.6). When asked to rank the main problems facing the country, more than twice as many people cite unemployment than other issues, which include poverty, electricity, crime, education, infrastructure, and corruption (figure 2.7).

Despite recent improvements, labor productivity in Nigeria also lags behind many of its competitors. Labor productivity did grow by 3.4 percent per year from 2010 to 2013 and now contributes 55 percent of GDP growth. However, in 2013, output per worker was still just US$10,300 per year—57 percent less than the average of seven large developing economies (Leke and others 2014). Nigeria's low productivity is reflected in low wages; figure 2.8 shows the median wage across various sectors.

Figure 2.5 Unemployment in Nigeria, 1999–2010



Source: National Bureau of Statistics data, various years.

Box 2.1 Youth Unemployment in Nigeria

Nigeria's population, like in much of Sub-Saharan Africa, is exceptionally young. Overall, out of 100 Nigerians, 55 are under age 20, and 28 are between ages 20 and 40. This abundant supply of labor is a good demographic opportunity and, if fertility rates are reduced, the country will also benefit from an increase in the proportion of working-age adults to young dependents. But creating enough jobs for this youthful population also presents a significant challenge.

The youth unemployment rate was 14 percent in 2011[a]—which means that some 8 million people ages 15–24 were not working or studying. Youth are less likely to be employed than older workers, and this is reflected in the finding that youth are more likely to consider unemployment the most pressing concern facing Nigeria than older workers (see figure 2.7).

The problem is not just one of youth unemployment, but also underemployment and a lack of productive opportunities for young workers. Although younger generations have greater access to primary levels of education than their predecessors had, their employment opportunities have not improved. Worryingly, youth with more than primary education are more likely to be unemployed than those with primary education or below, with those with tertiary education the most likely group to be unemployed.

The share of those ages 15–24 working in agriculture was almost 20 percent higher than those ages 25–64 in 2011. For men ages 15–24 the share has remained around 70 percent since 1999, while for women ages 15–24 it has risen from 45 to 58 percent. Perhaps most tellingly, the share of youth with more than primary education working in agriculture has risen dramatically since 1999, from 25 percent to 55 percent for women and from 42 to 62 percent for men. Moreover, there is no guarantee of a transition into more productive work.

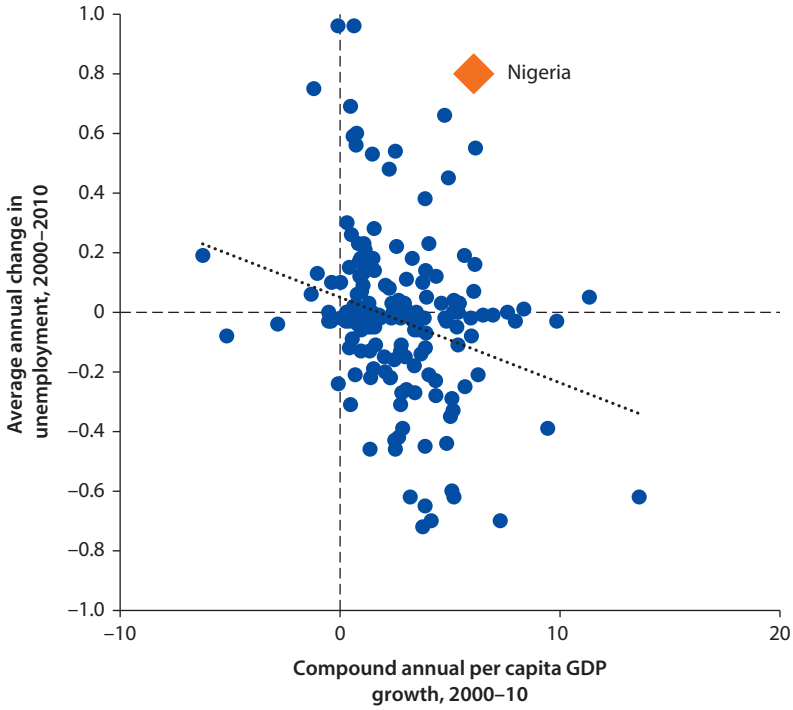
The challenge is not just to create sufficient jobs for the growing working-age population, but to create jobs that offer real productive opportunities for Nigeria's youth. The economy needs to create 40 million–50 million jobs from 2010 to 2030, or over 2 million jobs a year. Furthermore, these jobs need to offer better opportunity to make a living than is currently the case.

Source: World Bank 2015.
a. Using the estimate from World Bank 2015, above overall unemployment at 6 percent.

The Nigerian economy is bifurcated into highly productive industries employing an insignificant share of formal sector workers, and very low-productivity sectors employing the bulk of workers. The three sectors employing the largest share of workers are services (31 percent), wholesale and retail trade (23 percent), and agriculture (30 percent). Together they account for less than 85 percent of employment, but only 56 percent of output. The productivity of workers in these sectors is very low, ranging from US$4,000 to US$6,000.

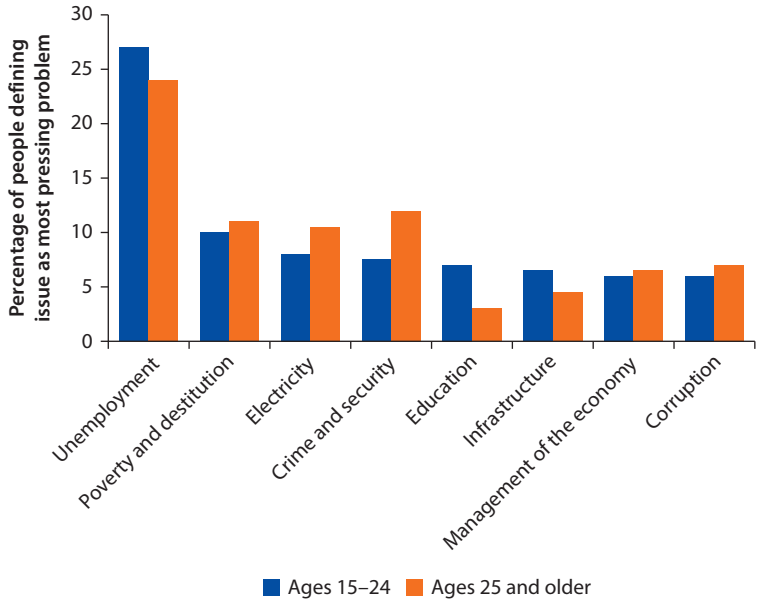
The three most productive sectors in 2010 were mining and quarrying (predominantly oil and gas), real estate, and ICT (see table 2.1). These sectors contributed over one-third of 1990–2010 GDP growth, but together accounted for a mere 1.5 percent of formal 2010 employment.

Figure 2.6 Changes in Unemployment versus Economic Growth



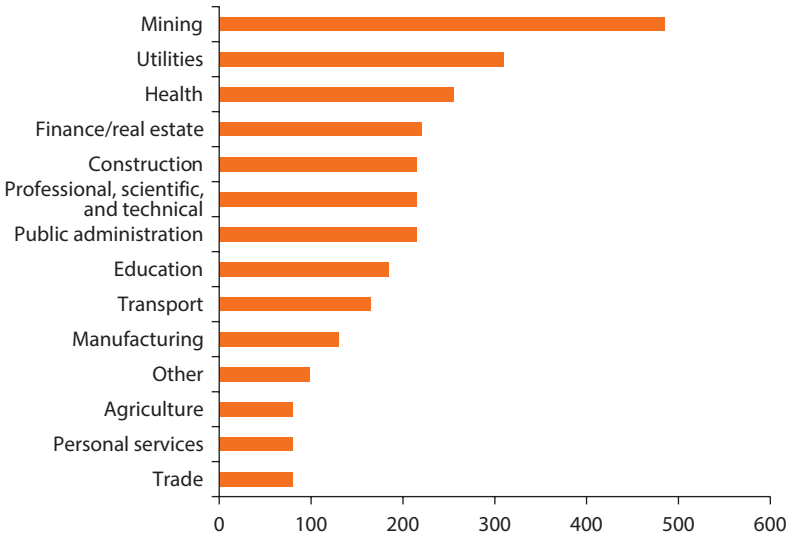
Source: World Bank, World Development Indicators.
Note: GDP = gross domestic product.

Figure 2.7 Most Pressing Problems Facing Nigeria



Source: World Bank 2014.

Figure 2.8 Wages by Sector in 2013 (median wage per month, US$)



Source: World Bank 2014; estimates based on General Household Survey (GHS), Panel 2012–13, Wave 2.

Table 2.1 Share of Employment and Productivity by Broad Sector, 2010

Industry	*Employees*	*Share (%)*	*Productivity (US$)*
Real estate	68,697	0.14	399,799
Mining and quarrying	146,485	0.30	384,007
ICT	469,513	0.97	84,471
Construction	1,142,569	2.36	9,148
Agriculture	14,737,693	30.39	5,864
Wholesale and retail trade	11,363,603	23.43	5,217
Manufacturing	5,335,898	11.00	4,462
Services	15,234,466	31.41	3,761
Total	**48,498,924**		**7,436**

Source: World Bank staff calculations using National Bureau of Statistics data.
Note: ICT = information and communication technology. The total productivity figure is national productivity calculated as total gross domestic product (US$360.6 billion) divided by total number of workers in 2010.

Manufacturing productivity is lower than in the agricultural sector, at US$4,462 in 2010, compared with US$5,864 for agriculture. Manufacturing productivity is also substantially lower than in comparable countries. A 2009 United Nations Industrial Development Organization study showed the manufacturing productivity of Nigerian workers was 10 percent of workers in Botswana and 50 percent in Ghana and Kenya. South Africa's manufacturing productivity was US$27,000 in 2013 (Leke and others 2014).

Recent GDP data, however, show that Nigerian manufacturing might be on the uptrend, with the sector growing 4.4 percent[2] from 2010 to 2013

(inflation-adjusted compound growth), contributing 14 percent to overall GDP growth over the period. The food, beverage, and tobacco subsector predominantly drove this growth contributing 11 percent to the growth in output. It has yet to be seen whether this trend develops into sustained growth; if it does, it would offer significant opportunity for smaller cities and towns to play a stronger integrative role in connecting farmers to both agricultural input and output markets, including food processing facilities.

Of the 13 manufacturing subsectors, 10 showed real (inflation-adjusted) compound growth rates above 10 percent from 2010 to 2013. The plastic and rubber products industry grew by an average of 23 percent per year over this period, basic metal, iron, and steel by 20 percent, and food, beverage, and tobacco by 15 percent (see table 2.2). The latter is the largest manufacturing subsector, contributing 11 percent to total 2010–13 GDP growth and 75 percent of growth in manufacturing output over the three-year period of the most recent data.

Although these figures are encouraging, it is too soon to declare a resurgence in manufacturing output. As such, it is vital that the recent growth in manufacturing output across most subsectors is given sufficient research and policy attention to support firms and workers, improve the business climate,

Table 2.2 Subsector Contributions to 2010–13 GDP Growth and Growth in Manufacturing

Manufacturing subsector	*2010*	*2013*	*Real CAGR (%)*	*Contribution to 2010–13 GDP growth (%)*	*Contribution to 2010–13 manufacturing growth (%)*
Plastic and rubber products	33.9	63.5	23.3	0.3	1.9
Basic metal, iron, and steel	44.5	76.5	19.8	0.3	2.0
Food, beverage, and tobacco	2,298.5	3,480.7	14.8	10.7	74.6
Cement	221.1	331.7	14.5	1.0	7.0
Pulp, paper, and paper products	24.4	36.5	14.4	0.1	0.8
Chemical and pharmaceutical products	25.2	37.6	14.3	0.1	0.8
Motor vehicles and assembly	21.9	31.8	13.3	0.1	0.6
Oil refining	255.2	358.3	12.0	0.9	6.5
Wood and wood products	123.4	169.9	11.3	0.4	2.9
Electrical and electronics	2.5	3.4	10.8	0.0	0.1
Nonmetallic products	59.5	74.3	7.7	0.1	0.9
Other manufacturing	116.1	139.2	6.2	0.2	1.5
Textiles, apparel, and footwear	352.5	360.1	0.7	0.1	0.5
Total manufacturing output	3,578.6	5,163.5	13.0	14.34	100

Source: National Bureau of Statistics data, various years; World Bank staff calculations.
Note: CAGR = compound annual growth rate; GDP = gross domestic product. Table sorted by real CAGR (2013 output figures were deflated to 2010 prices).

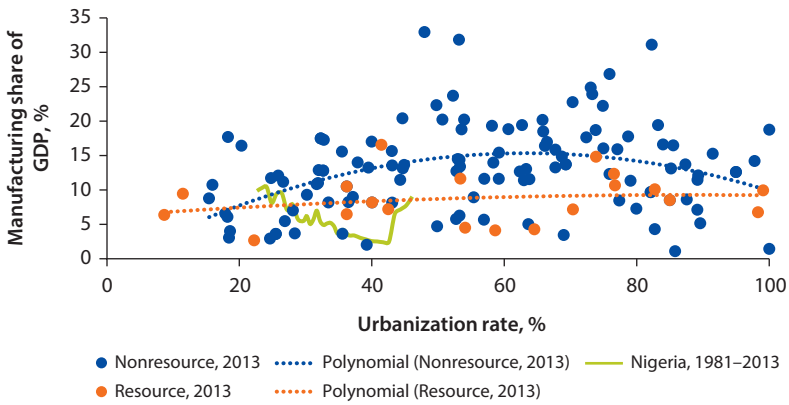
unleash positive localization and urbanization externalities by creating a functional urban system, and facilitate access to national and global markets and value chains.

The recent manufacturing growth has brought Nigeria's share of manufacturing to just 8 percent of GDP, in line with resource-dependent economies, but lower than economies at comparable levels of urbanization (figure 2.9).

The continuing weakness of the manufacturing sector is evident in the weakness of non-oil exports. Despite the growth and diversification of the economy, oil and gas continue to dominate Nigerian exports, averaging 95 percent of export revenues over the past decade and only slightly below this level in 2013 (table 2.3).

The paradox of strong economic growth but insufficient employment growth over the past two decades therefore can be attributed to a great extent to the

Figure 2.9 Manufacturing Share of Nigerian Economy as Compared to Other Countries by Urbanization



Source: World Bank, World Development Indicators; World Bank staff calculations.
Note: GDP = gross domestic product. Resource-dependent economies defined as those with 20 percent natural resource rents as share of GDP or higher.

Table 2.3 Share of Oil and Gas in Total Exports

Year	*Share (%)*
1995	91.6
2000	97.5
2005	96.4
2010	93.5
2013	93.4

Source: United Nations Conference on Trade and Development trade data.
Note: The following sectors were aggregated into the oil and gas sector by the UN's Standard International Trade Classification: [333] petroleum oils, oils from bitumen; materials, crude; [343] natural gas, whether or not liquefied; [334] petroleum oils or bituminous minerals >70 percent oil; [342] liquefied propane and butane; [344] petroleum gases, other gaseous hydrocarbons, n.e.s (Complete list available at http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=14).

weak performance of the manufacturing industry and the growth of the highly productive ICT, real estate, and oil and gas sectors. To generate the employment needed to reduce poverty and unemployment, especially youth unemployment, Nigeria urgently needs to develop and grow labor-intensive industries. The manufacturing sector and the urban industrial corridors in which they are located offer such an opportunity.

Growth and Employment in Regional and Urban Economies

An analysis of location quotients reveals important industrial specialization across regions. National-level data masks industrial concentrations across six Geopolitical Zones and metropolitan regions. State-level employment data by industry offers a plausible proxy for the industrial composition of metropolitan regions.[3]

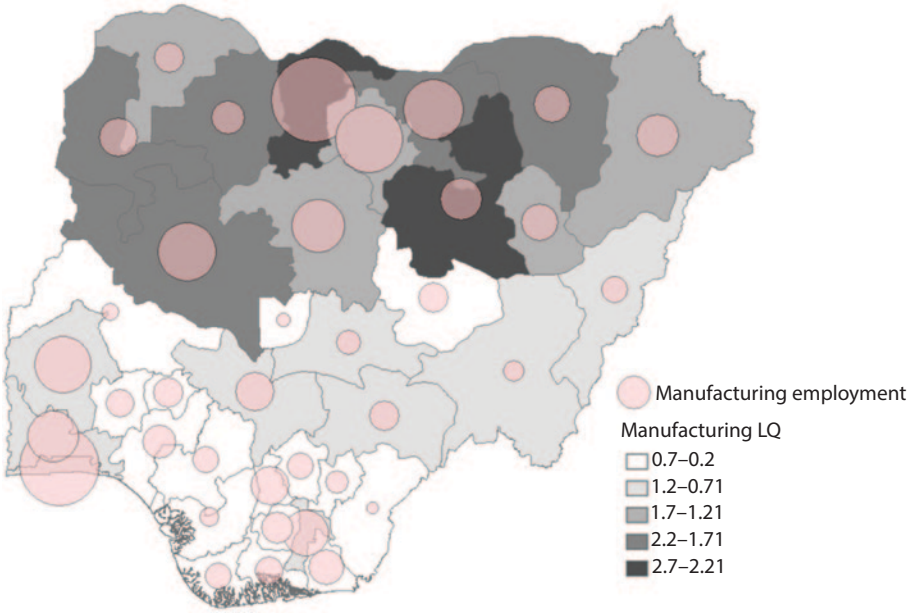
The ICT and real estate sectors, together with oil and gas, drove over one-third of GDP growth over the last two decades, and are concentrated in the southwest of Nigeria. The ICT sector is highly concentrated, with nearly 60 percent of employment in the South West. Over 26 percent of total ICT employment is concentrated in Ogun State, and a further 18 percent in Lagos, together accounting for 44 percent of national ICT employment concentrated in the Lagos-Ibadan industrial corridor.

Ogun, as noted, is particularly specialized in ICT, with a location quotient of 7.2. The sector accounts for nearly 8 percent of total formal sector employment in the state (map 2.1). This is likely due to the cost of housing in Lagos, driving workers to neighboring Ogun State. The ICT sector also comprises a considerable 2 percent of total employment in Lagos. Although total ICT employment constitutes a minuscule share of total national employment, its concentration in the Lagos-Ibadan industrial corridor has considerable direct and indirect effects on Lagos and its surrounding economy.

The manufacturing sector is more spread out across the country, but nonetheless heavily concentrated within three major agglomerations: the Abuja-Kaduna-Kano industrial corridor in the North Central and North West Zones, the Lagos-Ibadan industrial corridor in the South West Zone, and a concentration reaching from Port Harcourt (Rivers State) in the South South Zone through Imo and Enugu states in the South East Zone. Lagos has the largest concentration of manufacturing small and medium enterprises (1,195), followed by the North West Zone around Kano, the largest city and commercial capital of Northern Nigeria, as illustrated in map 2.2.

Lagos has the highest number of manufacturing workers, with 545,000 manufacturing jobs, accounting for 15 percent of total state employment. The size of manufacturing employment in Lagos, however, is proportional to the size of its population, evident by a location quotient of 1.03. Other major manufacturing agglomerations are in Oyo and Ogun states, making the South West the largest manufacturing agglomeration with its three states accounting for 27 percent of national manufacturing employment,

Map 2.1 Manufacturing Employment Location Quotient by State, 2010



Source: Bloch, Makarem, and others 2015; data from National Bureau of Statistics 2010a.
Note: ICT = information and communication technology; LQ = location quotient.

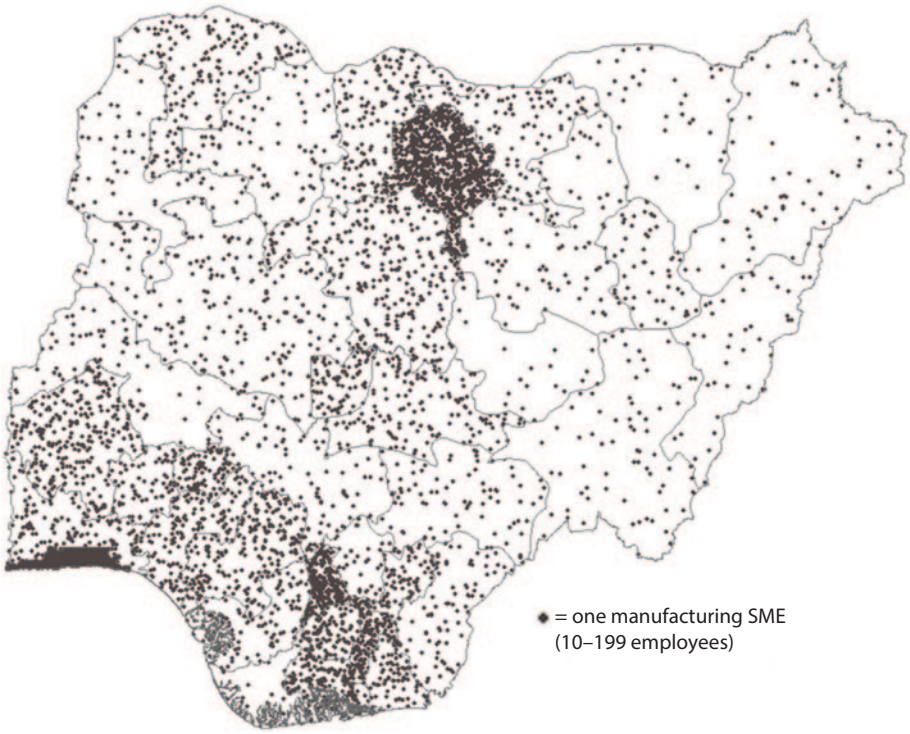
predominantly concentrated in the Lagos-Ibadan industrial corridor through Ogun State.[4]

Kano State is the second largest manufacturing agglomeration, with 384,000 employees, and a location quotient of 1.23. Manufacturing here is principally located in Kano City, primarily in textiles and tanning and leather. However, these two subsectors are in decline and, moreover, are low productivity activities, as reflected in the state's low GDP per capita. Attempts to protect the manufacturing industry from imports have failed due to an inability to regulate and protect the border, which is flooded with "Made in Nigeria" imports from China. Jigawa and Kaduna are also major manufacturing employment centers, making the North West an important manufacturing zone, with the greatest concentration stretching along the Abuja-Kaduna-Kano industrial corridor.

The services industry is highly diversified and its subsectors are concentrated in the southwest, in and around Lagos. Three highly productive subsectors have driven the sector's growth over the past two decades: professional, scientific, and technical services; the public sector; and finance and insurance. Together, they accounted for almost 60 percent of growth in services from 1990 to 2010.

The professional, scientific, and technical services sector is highly concentrated in the South West. The subsector employs almost 780,000 workers, and is highly

Map 2.2 Location of Manufacturing SMEs at the State Level, 2010



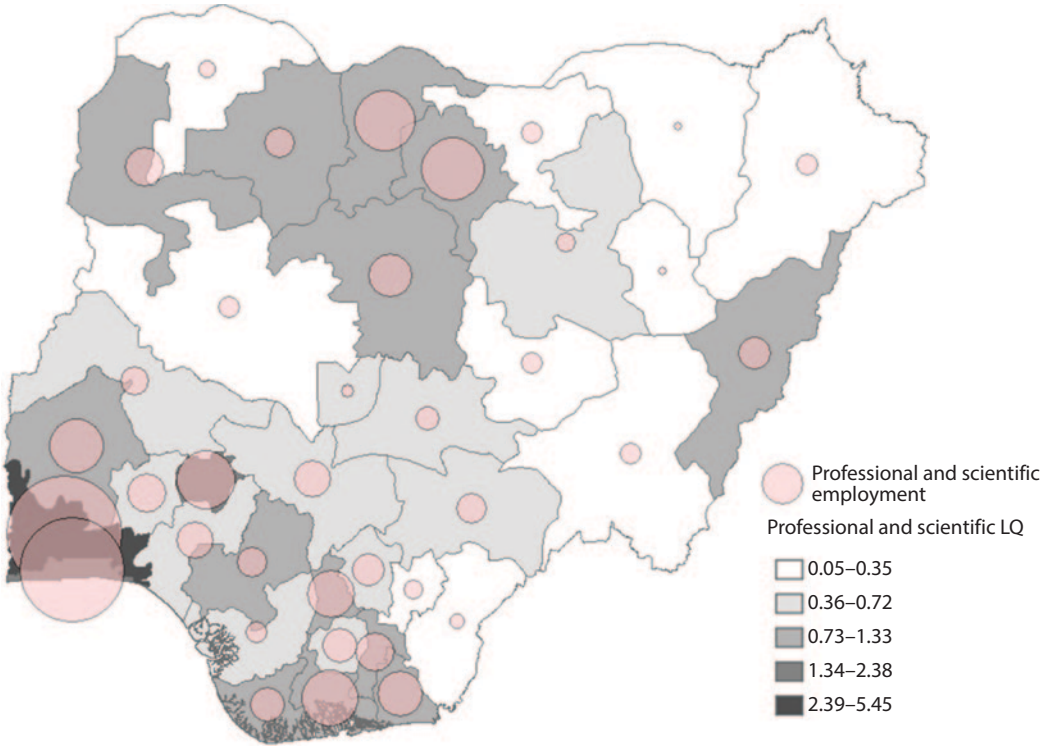
Source: Bloch, Makarem, and others 2015; data from Small and Medium Enterprises Development Agency of Nigeria 2010 Collaborative Survey; National Bureau of Statistics 2010b.
Note: SMEs = small and medium enterprises. Dots represent one firm in that state, not the exact location of a firm.

concentrated in Ogun State, with a location quotient of 4.1. It makes up a staggering 10 percent of state employment, or 20 percent of the subsector's national employment. The second largest concentration is in Lagos (126,000 workers), with a location quotient of 1.5 (16 percent of the subsector's national employment). The professional, scientific, and technical services industry clearly has positive employment and multiplier effects on the agglomerations in which it is concentrated, namely the Lagos-Ibadan industrial corridor (see map 2.3).

The sector offers high-end services to the oil and gas industry. The growth of the oil-related sector is likely consistent with evidence in the literature of the success of the government's increased local inputs into the oil and gas industry:

> From the Petroleum Act of 1965 to the directives in 1995 and 2005 mandating the use of local services of low-tech onshore supply of goods and services to Nigerian firms, government policies have paid off, evident by an estimated rise in local content within the Oil and Gas sector from 3 to 5 percent in 1970 to 20 percent in 2004 (UNCTAD/CALAG 2006) and to 39 percent in 2009.
>
> (Adewuyi and Oyejide 2012, 453)

Map 2.3 Professional, Scientific, and Technical Services Employment and Location Quotient by State, 2010



Source: Bloch, Fox, and others 2015; data from National Bureau of Statistics 2010a.
Note: LQ = location quotient.

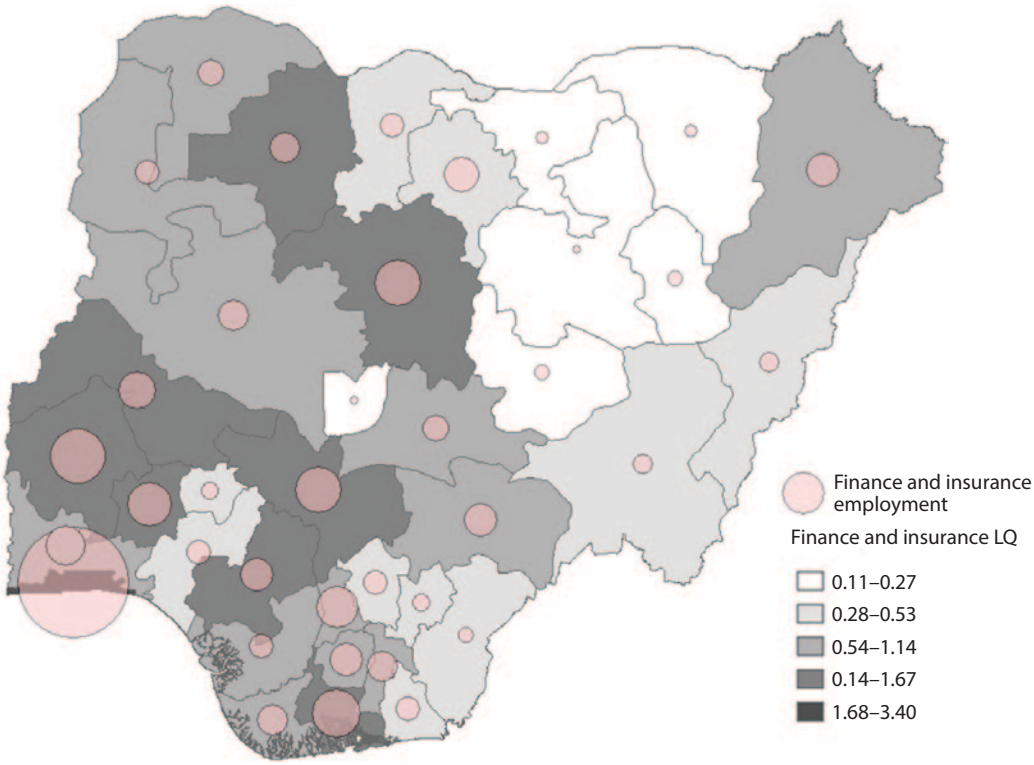
The finance and insurance sector is also concentrated in Lagos. Although it employed just over 171,000 workers in 2010 (1 percent of services employment and 0.4 percent of national employment), some 27 percent, equivalent to 46,000 employees, is concentrated in Lagos (see map 2.4). Again, the disproportionately high concentration of productive workers has a positive impact on the wider regional economy of Lagos.

The Urban Informal Economy

High levels of unemployment and underemployment have contributed to the growth of the informal economy—and today the majority of Nigerians are employed informally. The informal economy, although a widespread phenomenon, is difficult to define. The National Bureau of Statistics uses an approach consistent with that of the International Labour Organization. It defines the informal economy as:

> …that which operates without binding official regulations (but it may or may not regulate itself internally) as well as one that operates under official regulations that do not compel rendition of official returns on its operations or production process
> (CBN/FOS/NISER 2001)

Map 2.4 Finance and Insurance Employment and Location Quotient by State, 2010



Sources: Bloch, Makarem, and others 2015; data from National Bureau of Statistics 2010a.
Note: LQ = location quotient.

According to National Bureau of Statistics data, there is slightly more than one informal worker for every formal sector worker: 54.6 million informal workers versus 48.5 million formal sector workers. In other words, informal workers make up 53 percent of the active labor force.

A World Bank (2015) study, however, estimates the share of informal nonfarm employment as high as 84 percent. The study uses data from the 2010/11 General Household Survey and defines informal jobs as wage workers working without a contract and self-employed, and household enterprise workers in firms that are not registered with the authorities. While private sector jobs are almost exclusively (96 percent) informal, three quarters (74 percent) of public sector jobs are also informal, using this definition.

The largest concentrations of informality as a share of workers are found in the north, as illustrated in table 2.4 below ranking the six Geopolitical Zones by their average state location quotient of informal employment. However, there are exceptions to this trend, such as the Rivers State in the South South and Ogun in the South West (map 2.5).

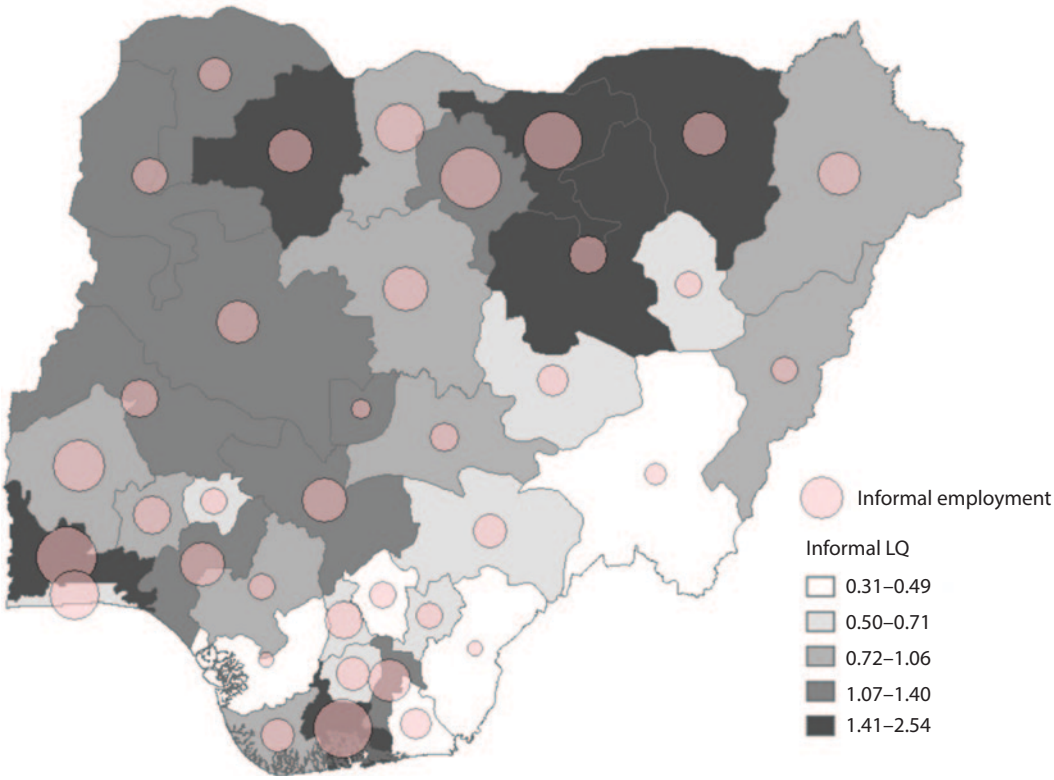
Workers in the informal sector are classified into seven categories. The majority, 62 percent, are categorized as proprietors or partners. A large 17 percent are

Table 2.4 Average State Location Quotient in Informal Sector by Geopolitical Zone, 2010

Zone	*Location quotient*
North West	1.42
North East	1.19
North Central	1.02
South West	0.96
South South	0.81
South East	0.73

Source: World Bank staff calculations using National Bureau of Statistics data.

Map 2.5 Informal Employment by State, 2010

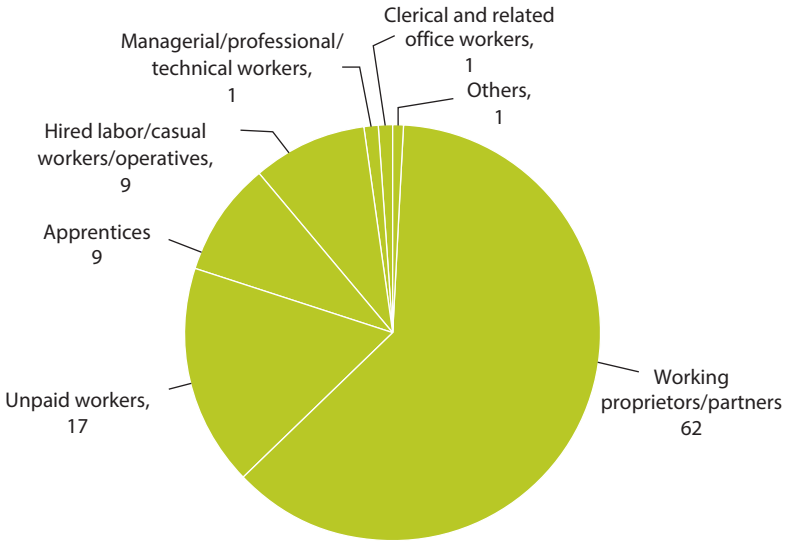


Source: Block, Makarem, and others 2015; data from National Bureau of Statistics 2010a.
Note: LQ = location quotient.

unpaid workers, followed by apprentices (9 percent) and hired labor and casual workers/operatives (9 percent), as illustrated in figure 2.10.

Over 40 percent of informal workers are engaged in wholesale and retail, and repairing motor vehicles, by far the largest categories of informal businesses. Unlike the formal economy, manufacturing is the second largest informal sector, accounting for 17 percent of informal sector microenterprises, followed by other

Figure 2.10 Share of Informal Workers by Category of Worker
percent



Source: National Bureau of Statistics data, various years.

social activities (11 percent), and accommodation and food services (10 percent). These four sectors comprise almost 80 percent of informal microenterprises. The agriculture, forestry, and fishing sector accounts for 7 percent, followed by transportation and storage (5 percent) and construction (2 percent).

Informality is the norm for a country at Nigeria's stage of development, and evidence from Latin America and Southeast Asia indicates that the share of informal employment may increase further with growth (World Bank 2015). As such, the share of jobs classified as informal is not necessarily a good indicator of the quality of employment opportunities. So rather than focusing on reducing informality, it is more important to raise productivity across all sectors, in formal as well as informal enterprises.

Informality of urban employment is associated with lower levels of productivity and lower tax revenue. Informal businesses are much less likely to grow given their lack of access to the formal legal system, thereby reducing the benefits of scale economies that urban environments can provide. Furthermore, informal enterprises avoid taxation, which limits the funds available for public use. This leads to a vicious circle of increased taxation and fees imposed on the formal sector, which reduces the competitiveness of formal firms, inducing further informality and reducing foreign direct investment (Mbaye 2014). Studies have found that, internationally, an increase of one standard deviation in the size of the informal sector corresponds to a 1–2 percentage point decline per capita GDP growth (Oviedo, Thomas, and Karakurum-Ozdemir 2009).

Average wages in the formal sector are about 70 percent higher than the informal sector, although there is overlap, with some informal workers earning more than some formal workers. Part of this formal sector premium is due to education: the returns to education are lower in the informal than the formal sector. This reflects the problem of underemployment in the Nigerian economy, whereby workers are unable to find employment that is well matched to their level of education or skills and end up working in low-productivity informal jobs where their education is not needed and hence not compensated (Behar 2013).

The distinction between formal and informal is, however, more complex than it first appears. Workers in the informal economy are not necessarily a residual comprised of disadvantaged workers rationed out of good jobs, but may have chosen voluntarily to pursue an entrepreneurial informal sector job. Conventional economic theory views informal workers as the less advantaged sector of a dualistic or segmented labor market, in which a lack of formal jobs and above market-clearing wages force workers into subsisting in informal jobs while they wait for an opportunity in the formal sector. However, although this may be the case for some, if not many informal workers, for others it is the optimal decision given their preferences, the constraints they face in their level of human capital, and the level of formal sector productivity in the country (Maloney 2004).

It is more appropriate to view formality as a continuum. Economic relations—of production, distribution, and employment—tend to fall at some point along a spectrum between pure "formal" relations (that is, regulated and protected) at one pole and pure "informal" (unregulated and unprotected) at the other, with many categories in between (Chen 2005). Many informal enterprises have a taxpayer ID number, and some maintain subcontractual relationships with multinational firms (Mbaye 2014). Importantly, it is possible to make the transition from formal to informal and, depending on their circumstances, firms and workers are known to move with varying ease and speed along the continuum or to operate simultaneously at different points on the continuum (Chen 2005).

That said, firms must overcome considerable barriers to enter the formal sector. Research exploring the determinants of informality drawing on a survey of micro, small, and medium enterprises in Côte d'Ivoire, Kenya, Nigeria, and Senegal confirms that corruption, which increases the cost of registration, is a determining factor in informality. The research also found that higher productivity firms, with better access to bank finance, are more likely to register and remain formal (Gajigo and Hallward-Driemeier 2012).

In other words, the drivers of informality are high formal costs to registration, corruption and a weak rule of law, low productivity, and low access to bank finance. Current economic conditions therefore provide few incentives for informal firms to grow, particularly given high corruption and little faith in the impartiality/effectiveness of the judiciary. Transparency International ranked Nigeria the most corrupt country in the world in 2000, and it is currently ranked 136th out of 175 countries.

The functioning of the urban economy in Nigeria reflects the continuum just described. Many links exist between formal and informal firms, further blurring

the lines between the two sectors. For instance, many informal enterprises have production and distribution relationships with formal enterprises supplying inputs, finished goods, or services, either through direct transactions or subcontracting arrangements. In addition, many formal enterprises hire wage workers under informal employment relations. For example, many part-time workers, temporary workers, and homeworkers work for formal enterprises through informal or semiformal contracting or subcontracting arrangements.

The relationship between government and the informal sector in Nigeria is a complex one. On the one hand, policy makers and authorities have sought to "formalize" the informal economy, treating it as a social problem. In other cases, however, they have engaged with and recognized firms operating informally. Ways in which authorities have sought to formalize the informal sector include fines, closures of informal businesses, and repossessions of informal property. However, these methods are largely counterproductive as many informal firms do not have the means to formalize and the benefits of formally registering for a small firm are far outweighed by the costs. Ultimately treating the informal sector in this way creates barriers to growth for informal enterprises, reducing their productivity and ability to generate income for their owners and employees.

It is far more effective to engage with the informal sector. One way that government can do this is through engaging with local business associations that represent informal firms in a particular sector or location. An example of this is the interaction between informal ICT firms in the Otigba ICT cluster in Lagos and the Lagos state government, which relates with them through the Computer Allied Products Dealers Association of Nigeria and even collects taxes from firms (Oyelaran-Oyeyinka 2014).

Given the right conditions, informal firms can raise their productivity, increasing the wages and benefits for employees and, ultimately, make the transition to formality. The experience of informal enterprises in other parts of the developing world demonstrates the high productivity that informal sector enterprises can achieve through local economies of scale generated by multiple small enterprises. In China, for example, informal township and village enterprises, once their property rights were secured, increased investments in human and physical capital and established links with formal and informal enterprises. Local informal township and village enterprise clusters in small urban regions generated local scale economies with positive economic spillovers, playing a critical role in China's economic development.

Successful informal enterprise clusters exist in Nigeria. The Otigba ICT cluster, already cited, is a spontaneous cluster that has been described as the "Silicon Valley of West Africa." The cluster contains a variety of firms spanning the formal-informal continuum, from sole traders dealing in laptop accessories, to retailers and small repair shops and firms that make locally branded hardware products, including laptops and tablet computers, which are formally registered and even exported internationally. In 2005 the cluster contained about 3,500 firms, which between them employed about 10,000 people. And the numbers have grown since then. Moreover, in 2013, more than one-quarter of businesses

were estimated to be worth between US$6,200 and US$31,000, and more than a tenth of businesses were worth over US$620,000 (Oyelaran-Oyeyinka 2014).

Other similar examples include the Nnewi Automotive Parts Industrial Cluster, the Aba shoe and garment clusters, the Ilorin weaving cluster, Kano leather tanneries, and the Onitsha Plastic Cluster (also known as the Osakwe Industrial Cluster).

Informal clusters in Nigeria share distinct characteristics that have contributed to their success. These include: (a) the existence or establishment of active business associations and social/popular networks; (b) the contributions of skills, learning spillovers, and entrepreneurship in creating opportunity and innovation; (c) significant interfirm links, specifically with large firms, (d) specialization and division of labor among individual firms, which enhances productivity; (e) engaging in workplace training in the form of apprenticeships; and (f) the sociocultural factors, which play an important role in the development of informal clusters in Nigeria, as a shared sociocultural identity provides a basis for trust and reciprocity in an informal setting (Bloch, Makarem, and others 2015).

The Urban Business Environment

The Nigerian urban business environment discourages investment and frustrates competitiveness. A large body of research on Nigeria has focused on the business climate and its constraining effects on firms in general and on manufacturing firms in particular.[5] Nigeria ranked 175th out of 189 countries in 2014 in the World Bank's Doing Business ratings. Its ranking was particularly bad for dealing with construction permits, getting electricity, registering property, paying taxes, and trading across borders.

A dysfunctional business climate undermines worker productivity. Although wages in Nigeria are lower than many of its competitors, this low productivity means that workers produce less, on average, than competitors, reducing competitiveness in the global economy.

The biggest constraint to productivity in Nigeria, as perceived by businesses, is power. Almost all Nigerian firms experience power outages, averaging 8 hours per calendar day, resulting in indirect costs equivalent to 4.3 percent of sales for manufacturing firms and 5.3 percent for retail firms (Iarossi and Clarke 2011). To address this situation, the majority of firms (88 percent) have their own generators, which adds significantly to their operating costs. Manufacturing firms reported that approximately 69 percent of their total electrical utilization comes not from the public grid, but from their own generators, with large manufacturers more dependent than smaller ones on generator power. The cost of acquiring and maintaining a generator amounts to 9 percent of the total value of a firm's equipment and machinery and 13 percent of its operating expenses (Iarossi and Clarke 2011).

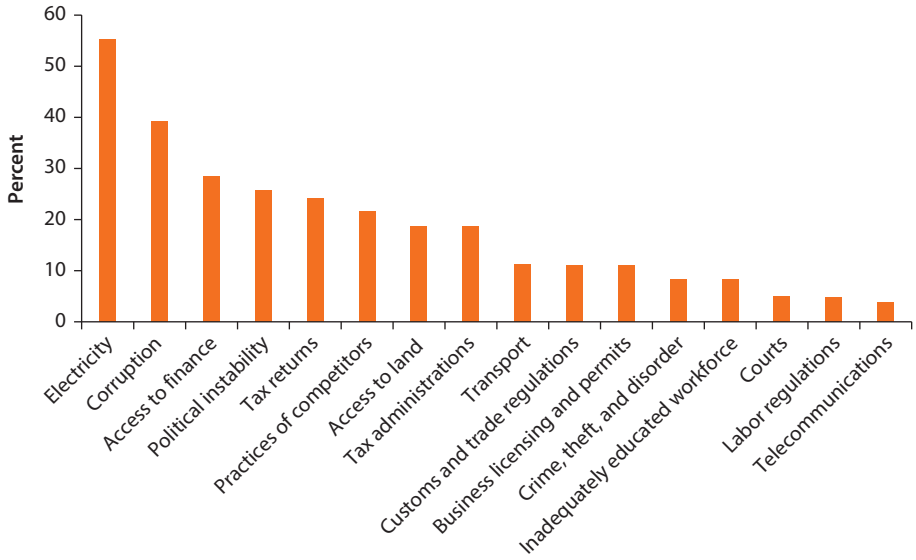
The centrality of a poor infrastructure environment and particularly poor provision of electricity to business operations is confirmed in enterprise surveys. Nearly 80 percent of total firms identify electricity as a major constraint,

well above the Sub-Saharan average of 50 percent (figure 2.11). However, compared to other countries in Sub-Saharan Africa, neither the cost nor the skill level of labor is seen as a major problem, although there is some evidence that wages in Nigeria are high relative to productivity, making them less competitive (World Bank 2014).

Transport problems are also a significant problem in Nigeria, accounting for annual sales losses of 2.4 percent (Iarossi and Clarke 2011). Road transport is the primary means of transport in the country and poor quality roads and congestion are the main cause of these losses. The cost and amount of time taken to process imports and exports is also higher than in other comparable countries. The cost of congestion is a significant fraction of GDP and varies across regions. Findings from a background paper for this report suggest that traffic congestion costs the Federal Capital Territory/Abuja, Kano, and Lagos US$389 million, US$673 million, and US$2.8 billion a year, respectively, in lost productivity—or 7.1 percent, 5.0 percent and 3.5 percent of these cities' regional GDP (figure 2.12).[6] Nationally, some US$5.51 billion is lost from congestion annually in the country's 14 largest cities.[7] This is some 1 percent of the country's GDP.

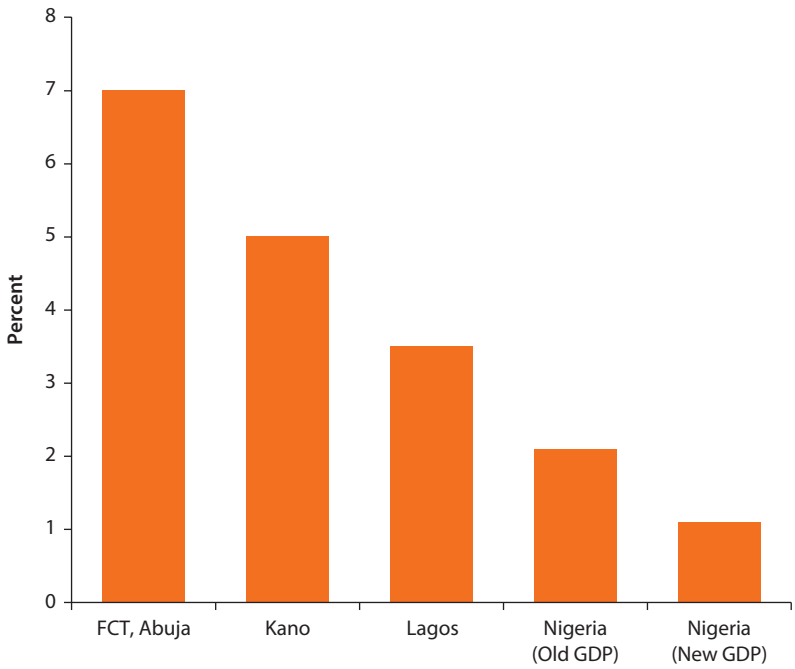
Access to finance and, to a lesser extent, the cost of finance are perceived by Nigerian firms as the third most important constraint to doing business (World Bank 2011). About 52 percent of firm managers said that access to finance was a serious constraint, and 46 percent of firm managers said the same about the cost of financing. Nigeria's businesses are starved of capital: only about 12 percent of Nigerian firms have an overdraft facility and only about 14 percent have an overdraft or loan. Collateral is also more likely to be required to obtain

Figure 2.11 Share of Firms Identifying Issue as "Major" or "Severe" Obstacle



Source: World Bank Enterprise Surveys.

Figure 2.12 Annual Cost of Congestion as a Proportion of Regional GDP



Sources: Travel demand surveys in the FCT/Abuja (2013), Kano (2012), and Lagos (2009, 2012), undertaken by the Nigeria Infrastructure Advisory Facility (NIAF), funded by the U.K. Department for International Development (DFID) Demand Survey.
Note: GDP = gross domestic product.

a loan and the amount of collateral required as a ratio of the loan was higher than comparator countries (at 170 percent of the value of the loan). Even when firms do manage to get a loan, the time they have to repay it is shorter than in comparator countries.

That the formal financial sector services a mere 1 percent of businesses' financial needs highlights the inadequacy of Nigeria's financial infrastructure. This obstacle, however, does not affect all firms equally: the smaller the firm, the greater the challenge of accessing capital (Iarossi and Clarke 2011).

Setting up a business is very difficult. In particular, land transactions are very costly, lengthy, and complicated, discouraging both buyers and sellers from the formal procedure. To transfer a real estate property in some jurisdictions, one has to pay stamp duty (2–3 percent of asset value), capital gains tax (2 percent of land value), transfer tax (8–30 percent of land value as set by states), and a registration fee (3 percent of asset value). Unlike most countries, capital gains are taxed on the land value, not the gain. The transfer tax percentage is significantly higher than in other countries, and registration fees are a percentage of asset value, not a fixed amount (Iarossi and Clarke 2011). The cost of titling land alone in Lagos and Port Harcourt is 30 percent of the construction cost.

Several of these obstacles to business development are particularly pertinent to urban labor-intensive manufacturing firms. Manufacturing industries are much more dependent on a constant and reliable flow of electricity than are real estate and service-sector firms. Congestion, expensive transport, and border barriers are most relevant for the tradable sectors. In other words, while Nigeria's poor business environment affects all firms, it has a disproportionate impact on the productivity of manufacturing firms.

On the other hand, some of these obstacles, namely bureaucratic trade barriers and infrastructure, play a lesser role as obstacles to the development of high-productivity sectors such as ICT; real estate and construction; professional, scientific, and technical services; entertainment; and finance and insurance, which have been important drivers of GDP growth over the past two decades. Growth of these sectors attests to the resilience and ingenuity of urban entrepreneurs who have successfully developed their businesses in these sectors in the face of severe challenges.

Trade, Connectivity, and Regional Development

A long and rich historical legacy of north-south trade in Nigeria is being undermined by poor and deteriorating transport infrastructure, dysfunctional institutions, and a lagging manufacturing sector. The "economic distance" between regions reduces firm competitiveness and diminished positive externalities from regional agglomeration economies. As a result, stark and growing disparities are evident in levels of economic development and living standards between the north and the south of the country.

A complex system of internal and cross-border trade networks exists in Nigeria, which is deeply rooted in cultural and historical ties. The structure of the present-day Nigerian spatial economy can trace its origins to the colonial period and the economic system that developed under colonial rule. Patterns of internal and cross-border trade can trace their origins back even further.

Nigeria enjoys a historical legacy of north-south trading relations dating to the precolonial era. In this period, a complex system of trade and urban economies existed, and was particularly evident in the north. The Hausa states and the Kanem Empire, centered on Borno, were part of a trade network stretching across South Sudan northwards to ports in North Africa and on to Europe.

The colonial era and subsequent policies pursued after independence saw the development of new patterns of internal trade and the reinforcing of north-south trade links.

Internal trade expanded with the construction of railways across the country. The western line between Lagos and Kano was finished in 1912 and an eastern line from Port Harcourt to Jos, which joined up with the western line in Kaduna, was finished in 1927. This substantially reduced transport times and costs from the north of the country to the coast. For example, the journey time from the tin mines in Jos to the coast decreased from 35 days to less than 35 hours, while costs fell by three-quarters (Mabogunje 1965).

The result was a huge increase in the production of agricultural and mineral commodities for export in the north of the country, with the direction of trade now channeled almost exclusively toward the ports of Lagos and Port Harcourt, which became the most important nodes in the transport network (Mabogunje 1965).

The spatial economy developed along the same patterns post-independence, though at that point the economy was based on manufacturing supported by the policy of import substitution. Kano and the surrounding area emerged as the most industrialized region of the country. Leather, textiles, and food production were the dominant industries. By the 1980s, before the onset of structural adjustment, 2,500 manufacturers were located in Kano (Miles 2013). At its height, the textiles industry employed over 350,000 workers in over 175 businesses that exported fabrics throughout West Africa (Miles 2013). Throughout this period manufacturing was concentrated primarily in four areas of the country:

- Southwest corridor between Lagos and Ibadan
- Southeast industrial zone: Onitsha, Port Harcourt, Enugu, Aba, Umuahia, and Calabar
- Northern industrial zone: Kano, Kaduna, Jos, and Zaria
- Midwest industrial zone: Benin City, Sapele, and Warri

However, the failure of import substitution, the deterioration of infrastructure, poor governance, and a dysfunctional business climate has taken a heavy toll on the manufacturing sector across the country.

Present-day trade in Nigeria is conducted predominantly along road corridors. These routes span the length and breadth of the country, as well as linking Nigeria with its neighbors. The Trans-African Highway network represents important trade corridors facilitating road freight movements to and from Benin, Cameroon, Chad, and Niger, stimulating regional trade and acting as particularly important connections for Nigeria's landlocked neighbors.

The key internal trade route is the Lagos-Kano corridor, which is the main channel for domestic, regional, and international trade. It spans approximately 1,000 kilometers, linking the country's two largest cities, and passing through Kaduna, Ilorin, and Ibadan. A newly renovated railway also links the same cities. The Lagos-Kano corridor is the main link between the north and south of the country.

Trade along this corridor flows mainly from south to north. It consists of imported consumer goods shipped through the port at Lagos, manufactured goods produced in the south, petroleum, and inputs for manufacturing firms in the north. North-south trade consists mainly of livestock and agricultural produce, as well as some manufactured goods produced in the north that are predominantly destined for export through Lagos.

The majority of Nigeria's trade with neighboring countries in West Africa is informal. Informal cross-border trade is estimated to be worth around 20 percent of Nigeria's GDP (Afrika and Ajumbo 2012). This trade is deeply rooted in the

country's cultural history. To some extent, the historical trade networks persist in the present day. For example, the states of Kano and Katsina in the north and the province of Maradi in neighboring Niger form a vast, densely populated trading area based on the cultural area of the former Hausa states. An intensive trade in agricultural products thrives here, especially in livestock from Niger, cereals and manufactured products from Nigeria, and, above all, products reexported to Nigeria via Niger coming from Benin/Togo (OECD 2006).

Informal trade in food and consumer goods thrives along borders. From Benin, transborder trade is tilted in favor of the purchase of goods from across the border into Nigeria. Imported items are mainly consumer goods, while the main exports from Nigeria are plastics and petrol. Cotonou is the most popular place of purchase, mainly for used cars and spare parts. Purchases of frozen foodstuffs are made almost daily from Igolo. Major places of sale within Nigeria for foodstuffs and used cars are Idiroko, Lagos, and Sango-Otta; and the relatively less important markets are Ibadan, Sagamu, and Benin.

Connective infrastructure has played a pivotal role in the formation and development of modern day Nigeria, contributing to increased social, cultural, and economic integration and influencing the rate and pattern of urbanization across the country.

Today, however, poor connectivity is a constraint on interregional trade, limits integration, and inhibits the functioning of Nigeria's spatial economy. Poor transport infrastructure is reducing annual GDP by approximately 3 percent (World Bank 2007). Research indicates that there is strong correlation between the quantity, quality, and efficiency of a country's transport infrastructure and the level of economic development (World Bank 2004; WTO 2004).

Although Nigeria has an extensive transport network relative to other resource-rich African countries, much of it is in poor condition. In 2013, federal government expenditure on road and bridge, railway, aviation, inland waterway and maritime transport maintenance, and rehabilitation and reconstruction projects amounted to US$3 billion, of which roads and bridges accounted for 74 percent, railways 18 percent, aviation 7 percent, and inland waterways and maritime transport 2 percent.

The international benchmark comparison suggests that Nigeria should ideally look to spend a minimum of 1.8 percent of GDP (US$9.1 billion) annually on transport infrastructure, representing a 204 percent increase in the federal government expenditure on transport infrastructure in 2013. The analysis also indicates that 1.2 percent of GDP (US$6.3 billion) should ideally be allocated to roads, representing a 186 percent increase on 2013's expenditure.

Both paved and unpaved road densities are more than twice as high as comparable countries. However, the percentage of these roads in good or fair condition is lower. It is estimated that 40 percent of federal roads, 65 percent of state roads, and 85 percent of local government roads are in poor or bad condition requiring rehabilitation or reconstruction. The government is failing to maintain the roads built during the era of military rule. Due to the backlog of deferred

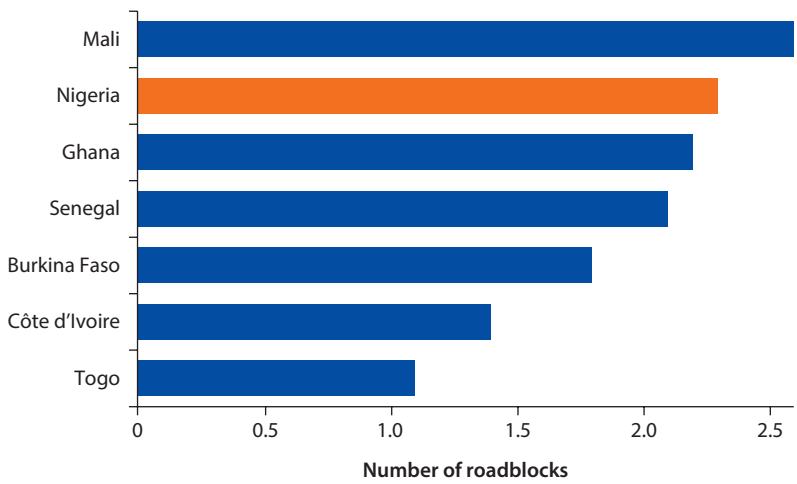
roads maintenance because of sustained underfunding of routine and periodic road maintenance, it will cost an estimated US$18.8 billion, or 3.6 percent of GDP, to fully rehabilitate all federal roads in poor condition.

Highway accessibility, in the form of drive time to the nearest federal or state capital, highlights large regional variation in its quality, which arises from a combination of poor road conditions, urban congestion, and missing highway and bridge connections. In addition to the quality of road infrastructure, institutional constraints reduce interregional connectivity. On average, Nigeria has more than two roadblocks every 100 kilometers (see figure 2.13).

One-third of ongoing road and bridge projects account for some 80 percent of total travel time savings. But a backlog exists of over 250 ongoing federal road and bridge projects[8] arising from a combination of significant funding constraints, the persistent prioritization of rehabilitation and reconstruction expenditure activities over routine and periodic maintenance activities, and the absence of detailed project planning and prioritization activities. When ongoing federal road and bridge projects were reviewed in terms of accessibility-based prioritization it was revealed that not all ongoing projects are equal in their impact on improving accessibility to federal and state capitals.

Evidence from a study of the cattle and leather trade along the Lagos-Kano corridor reveals a variety of unjustified charges and barriers along the corridor increase transport and related costs by 18 percent and increase journey times by 23 percent (Coste 2014). The study found there were 23 roadblocks along the 990-kilometer route. Although the majority of these were operated by public authorities, such as police and other security forces and state revenue collection and other agencies, many roadblocks were not legitimate and were used to extort illegal charges from traders. In addition, roadblocks operated by criminal gangs took an average of US$42 per trader and caused delays of over 30 minutes

Figure 2.13 Number of Roadblocks per 100 Kilometers, Selected Countries, 2011



Source: Coste 2014.

per journey. In addition to these facilitation payments at roadblocks, truck owners and drivers must pay to obtain a plethora of permits to operate in the successive states and local government areas (LGAs) that the corridor passes through. Many of these licenses were not mutually recognized between neighboring administrative authorities.

A study (USAID 2013) of the Lagos-Kano-Jibiya corridor (that is, the Lagos-Kano corridor plus the road to the border with Niger at Jibiya) found the corridor had 4.5 roadblocks on average and traders were required to pay an average of US$11.50 in bribes per 100 kilometers. This is substantially higher than other corridors in West Africa, even though many of these corridors cross national borders.

Evidence from a freight movement survey conducted by the Nigeria Infrastructure Advisory Facility on the A2 corridor between Abuja-Kaduna-Kano from December 2013 to May 2014 highlights additional inefficiencies that add to transport costs. A significant imbalance exists in compatible traffic flows between the north and south of the A2 corridor, which leads to freight vehicle overcapacity, vehicle underutilization, and excessive empty running. Empty running accounts for almost half of all truck movements on the corridor, with trucks often full on the journey north, but empty on the return journey south. Moreover, vehicles are mostly outdated and in poor condition, which reduces reliability and adds to fuel costs (NIAF-World Bank 2014). Box 2.2 summarizes the key findings of the survey.

Nigeria's rail network offers little alternative to poor road quality. The rail network, a legacy of the colonial era, stretches across the country, linking several major cities. However, due to deficient performance and erratic services, both passenger and freight traffic have been in long-term decline (see figure 2.14). As a result, traffic density is a tiny fraction of the already low levels found on other African railways (Foster and Puschak 2011), although, it has started to recover slightly in recent years.

One of the railways' most significant contributions to modern day Nigeria is the pattern of land use development that they have supported. In particular, the urbanization resulting from the emergence of "railway towns" in Lagos, Kano, Ibadan, Enugu, Jos, Kafanchan, Makurdi, Minna, Port Harcourt, Umuahia, and

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Box 2.2 Key Findings of the Kaduna Freight Survey

The results of the NIAF-World Bank Freight Survey indicate priority action areas to improve inter-city freight movement nationwide.

Priority 1: Road Condition and En Route Facilities

Infrastructure bottlenecks and poor road condition raise the costs of goods and services. A lack of en route repair, service, and maintenance facilities lowers the resilience of both the network and Nigeria's road freight transport fleet. The lack of adequate off-road overnight parking

box continues next page

Box 2.2 Key Findings of the Kaduna Freight Survey *(continued)*

facilities poses accident risks to drivers, vehicles, loads, other road users, and local communities by encouraging drivers to park adjacent to or directly on the roads.

To reduce journey times, improve journey time reliability, road safety, and network efficiency, and reduce the cost of freight movement, appropriate facilities are needed to improve road conditions including as a minimum the development of a network of freight villages offering repair and maintenance and secure parking.

Priority 2: En Route Security

Security issues en route present a significant obstacle to nighttime freight transport in Nigeria and thereby affect overall network use and road freight operational efficiency. Safety and security for road freight vehicles traveling and parking along strategic routes needs to be improved.

Currently, due to security issues affecting drivers, vehicles, and loads, many operators do not run at night, which means narrower operating nighttime if nighttime operations were more secure.

Priority 3: Modernizing Fleet Operations and Management

Nigeria's road freight transport fleet has inherent operational inefficiencies, which raises the costs of goods and services. Vehicles are extremely aged or in poor condition, which is exacerbated further by inefficient operations such as a high percentage of empty return trips. Policy makers need to provide incentives for a more efficient trucking market, with the primary focus on improving fuel economy and their truck fleets, and reducing operating costs.

Guidance and training in management techniques should be provided as a countrywide initiative, aimed at improving industry expertise and raising the bar for performance. This should come in the form of hard copy and online support material.

Priority 4: Empty Running—Third-Party Logistics Coordination and Consolidation

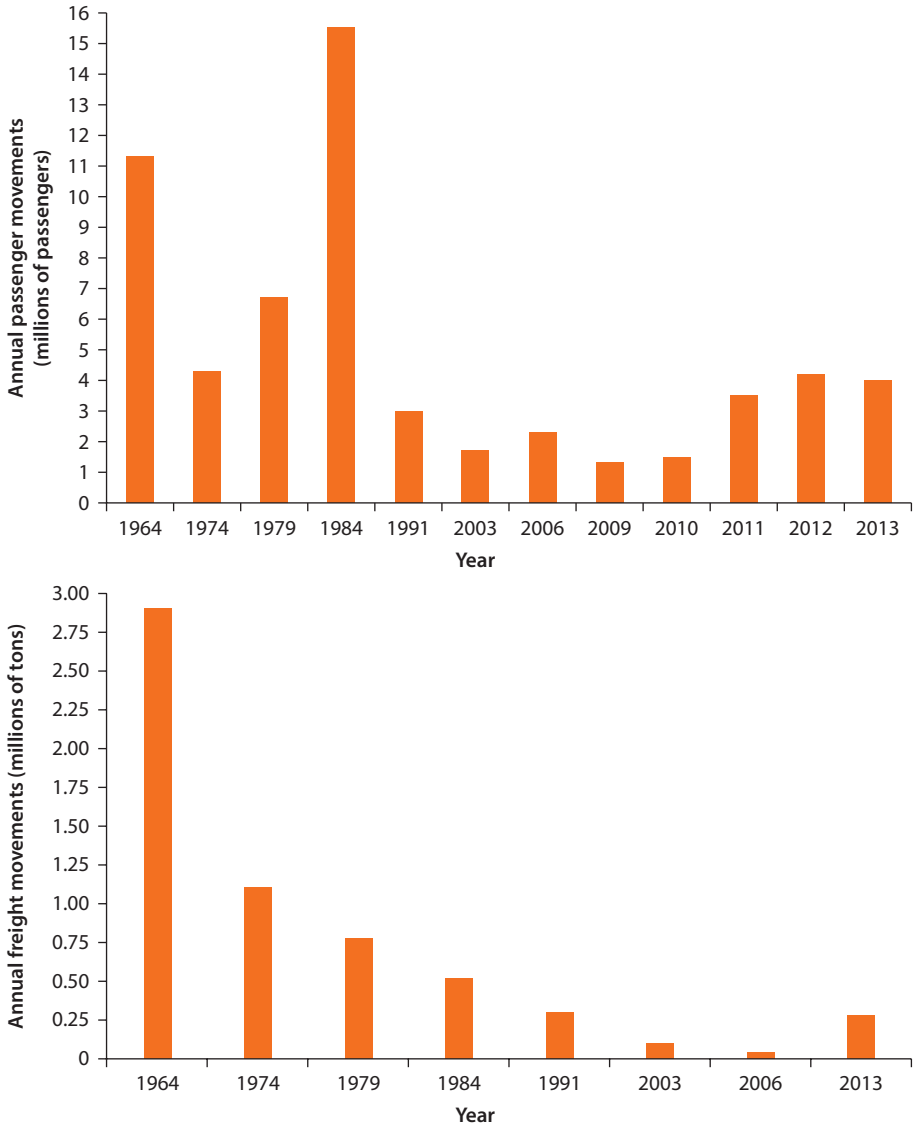
Empty running is a huge drain on fleet efficiency and network usage, and is crippling the efficiency of Nigerian road freight operations. Weak coordination can also erode efficiency, increase delivery times, and drive up operating costs.

A system of third-party logistics needs to be developed whereby an expert contractor operates and controls elements of the supply chain to better coordinate trucking operations, remove overcapacity, and reduce chronic levels of empty running, ultimately driving down the cost of road freight transport. The use of third-party logistics providers is a well-tested and proven structure in mature European markets and North America.

More coordination by government and trade bodies could also improve utilization levels. Coordination and consolidation through a third- or fourth-party logistics provider—a major operator overseeing all freight movements for customers sometimes using managed subcontractors, but with visibility across a wide range of activities to identify opportunities for efficiencies—would reduce levels of empty running and increase industry performance levels.

Source: NIAF-World Bank 2014.

Figure 2.14 Performance of the Railways: Passenger and Freight, 1964–2013



Sources: Federal Ministry of Transport; Nigerian Railway Corporation data.

Zaria, among others (Jaekel 1997). The railways also played an important role in the development of sea ports in Lagos and Port Harcourt, with the then railway administration being responsible for quayside cargo handling activities.

More recently, a renewed refocus on the need for the rehabilitation, renewal, and modernization of the nation's railways has seen increasing funds allocated to this sector, including an increased budget from the Subsidy Reinvestment and Empowerment Programme, culminating in the 2012 reopening of the Lagos-Kano segment of the western railway line, the ongoing rehabilitation of the

eastern railway line and the remainder of the western railway line, the rehabilitation and completion of the central railway line, and the ongoing construction of a new standard gauge railway line from Abuja-Kaduna.

As a result of poor infrastructure and dysfunctional institutions, trade between regions is very costly. The consequence of these infrastructure and institutional constraints—delays from poor quality roads, the high number of roadblocks, the cost and delays caused by permits and fees (both legal and illegal)—is that transporting goods within Nigeria is more akin to cross-border trade than what should be cheap and efficient interregional trade. Illustrating this problem, the cost of transporting a ton of freight from one end of Nigeria to the other is greater than moving a ton of freight from China to Europe.

The burden of high transportation costs falls disproportionately on small and medium-size businesses. Evidence from the Lagos-Kano corridor found that the cost of importing a container of tanning chemicals through Lagos to Kano is US$4,300 per trip, equating to slightly over 10 percent of the total value of the goods. Of this, US$2,100 is incurred in port costs and US$2,200 in transportation costs from Lagos to Kano. These costs are more than three times the cost of transporting a container of leather products south from Kano to Lagos, due to the empty running of freight trucks from north to south, as already discussed. These costs are prohibitively high for smaller leather producers, who have reportedly resorted to shipping small orders of chemicals north on passenger buses (Coste 2014), and constitute a significant share of their overall cost structure (evident by the high share of the costs of inputs, as the Kano case study illustrates in box 2.2).

The "economic distance" between regions, especially those connecting the north and south of the country, disconnects firms and regional economies from national "home-market effects" and dramatically reduces internal and external economies of scale and scope. Given Nigeria's 170 million people and its growing urbanized middle class, firms, particularly manufacturing firms with tradable outputs, have a potentially massive home market they can tap into—not doing so constitutes a major opportunity cost, which manifests in rising unemployment rates and informal employment.

The inadequate access of producers to markets beyond their immediate localities, especially those in large urban agglomerations, significantly reduces the internal economies of scale they can exploit. Such limits on the extent of the markets producers can access reduce regional external economies of scale and scope. As a result, cities and metropolitan regions cannot specialize and develop clusters connected to extra-regional supply chains. This severely hampers firms' capacities to focus on their core competencies, to develop the capabilities and absorptive capacities required to compete in broader and more competitive markets (including export markets), to upgrade to more productive activities, and to develop new products and services.

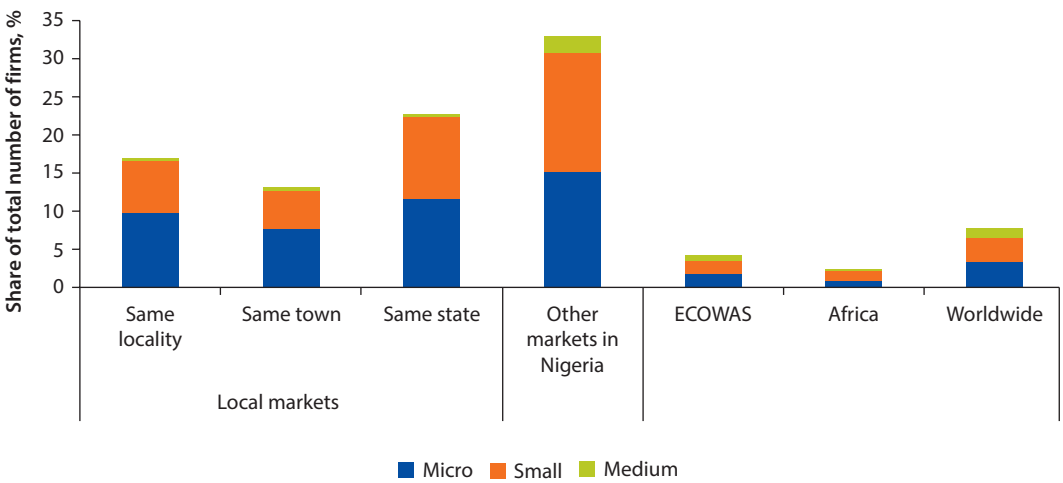
Regional fragmentation is evident in significant price variations across the country, as illustrated in table 2.5. Market fragmentation is also seen in the fact that most businesses in Nigeria are locked into local markets (figure 2.15). About 50 percent of firms identify their main market as being within the same state.

Table 2.5 Coefficient of Variation in the Price of Basic Goods between and within Regions

	North Central	*North East*	*North West*	*South East*	*South South*	*South West*	*Average CV within each region*	*National CV*
Maize, white	0.22	0.24	0.18	0.18	0.30	0.19	0.22	0.43
Maize, yellow	0.22	0.19	0.19	0.20	0.29	0.18	0.21	0.41
Rice, imported	0.13	0.16	0.14	0.14	0.19	0.14	0.15	0.22
Rice, local	0.15	0.17	0.15	0.17	0.30	0.20	0.19	0.30
Sorghum	0.24	0.22	0.19	0.18	0.21	0.20	0.21	0.41
Cement	0.22	0.15	0.20	0.07	0.10	0.08	0.14	0.24
Water 1	0.11	0.24	0.21	0.18	0.21	0.20	0.19	0.25
Water 2	0.13	0.16	0.22	0.12	0.24	0.17	0.17	0.22

Source: Drawn from Etienne 2014.
Note: CV = coefficient of variation.

Figure 2.15 Distribution of Firm Size and Product Market Channels



Source: World Bank team calculations using the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) 2010 survey.
Note: ECOWAS = Economic Community of West African States.

Most producers are therefore unable to scale up their production facilities and exploit greater economies of scale, and cities and metropolitan regions cannot specialize and grow their economies. Those that are able to overcome these constraints—and 50 percent of firms identify their main market as being within the same state—do so at a very high cost, according to the SMEDAN (Small and Medium Enterprises Development Agency of Nigeria) 2010 survey.

Poor connectivity and market fragmentation have contributed to growing regional inequalities in the country. Trucks running empty from the north of the country to the south is an illustration of how traditional north-south trade routes have been undermined by the recent industrial decline of northern states and the poor state of infrastructure connecting the north with the rest of the country. Box 2.3 details the rise and decline of manufacturing in Kano.

This growing inequality is reflected in the size of states' respective economies and incomes per capita (see map 2.6). With the exception of the Federal Capital Territory (Abuja), overall GDP is largely concentrated in the south, while GDP per capita is noticeably lower in the north, where it is just US$1,153 on average, compared to US$2,432 in the southern states and US$5,612 in the Federal Capital Territory. Data presented earlier also shows a significantly larger share of informal workers in the northern states.

Box 2.3 The Decline of Kano—The Industrial Capital of Northern Nigeria

With a rich history dating at least as far back as the end of the eleventh century, Kano is the commercial, industrial, and administrative center of Northern Nigerian. Since independence, Kano has witnessed tremendous rates of urbanization, population growth, and economic restructuring. Today its GDP is estimated at US$10 billion, equivalent to 4 percent of national output, but lower than its respective share of national population.

In the 1960s Kano was Nigeria's most industrialized state. Characterized by strong business-civic leadership and entrepreneurship, Kano was the economic powerhouse of the north, specializing in tanneries and leather work, textiles, agricultural processing, and, later, plastics. Formal sector manufacturing operations were located in five main industrial estates at Sharada, Challawa, Bompai, Tokarawa, and Zaria, which were originally serviced by the railway.

By the 1980s Lagos was the country's most industrialized city, but Kano still hosted over 2,500 manufacturing firms. Over the past two decades, however, the city has experienced major economic decline and deindustrialization. By 2011, two-thirds of its tanneries had closed, forcing over 16,000 workers out of the labor market. Only five tanneries were operational by 2013. The same story of decline characterizes Kano's leather and textiles industries.

Once known as the "Manchester of Africa" for its dynamic textile industry, the industry today has all but collapsed. At its peak Kano employed about 350,000 textile workers in 175 businesses; 30 textile firms were operating in 1990, employing about 50,000 workers. Today, a mere six factories survive, with only three operating at near full capacity.

Nigerian textile firms cannot compete with cheaper imports from China. The country's incapacity to regulate borders—despite a ban of textile imports—has resulted in more than US$2.2 billion worth of so-called Made in Nigeria apparel being smuggled into Nigeria through Benin every year. Nigeria's textile production has slumped to a mere US$40 million per year, disproportionately impacting the economy of the north and Kano in particular.

The entire state of Kano is currently host to just 350 large and medium manufacturing firms, the majority of which are in Kano City. Moreover, many of these are operating at low levels of capacity utilization, despite increasing manufacturing capacity utilization in Nigeria as a whole.

The competitiveness of manufacturing in Kano is adversely impacted by a weak business climate, in particular inadequate access to electricity. The state experiences the equivalent of 16 days of electricity outages per month, being the worst-hit state in the country, according to the Growth and Employment in States (GEM3) program financed by the World Bank and the

box continues next page

Box 2.3 The Decline of Kano—The Industrial Capital of Northern Nigeria *(continued)*

U.K. Department for International Development. The need for private power generators adds a substantial cost to businesses, and more so for larger firms: on average 15 percent of their operating costs.

The high costs of raw material and lack of government support for businesses are also major barriers (see table B2.3.1). It takes 40 percent more time to start a business and enforce contracts in Kano than in the rest of Nigeria.

Other problems highlighted through business surveys are the cost of capital, the difficulty of accessing financing for working capital, and, more recently, security concerns due to the conflict with Boko Haram. The business climate is also exacerbated by an inefficient and often dysfunctional political economy due to the rent-seeking, elite capture, and corruption endemic in many regional economies across Nigeria.

On a positive note, surveyed businesses in Kano consider the city to be a good place for running a business and are surprisingly optimistic about the future. A survey by the Manufacturing Association of Nigeria and the Nigerian Association of Small Scale Industries in

Table B2.3.1 Factors Affecting Business in Kano

Score	*Factors affecting business*
2.1	Road conditions
3.1	Traffic congestion
3.4	Water supply
4.2	Electricity/power
2.9	Drains and drainage
2.9	Solid waste collection
3.0	Security in Kano
3.6	Government assistance
2.2	Labor supply
2.3	Labor skills
2.3	Demand for products
3.5	Raw material costs
2.3	Transport to other cities
2.5	International connection
2.9	*Average for Kano*

- Good in Kano
- Neutral; neither especially good nor especially bad
- Bad in Kano

Source: Nigeria Infrastructure Advisory Facility Survey Kano (June 2013).
Note: N = 73. Respondents were asked to report on a scale where
1 = very good in Kano, and
5 = very bad in Kano.

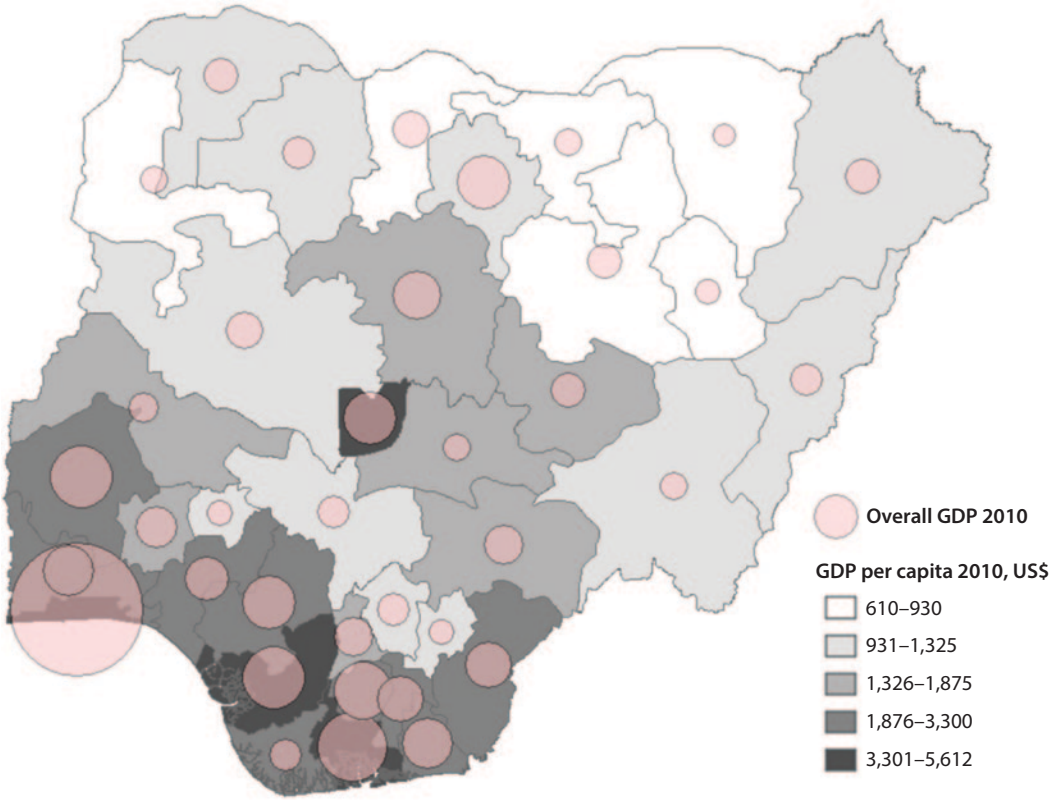
box continues next page

Box 2.3 The Decline of Kano—The Industrial Capital of Northern Nigeria *(continued)*

2013 reveals that 80 percent of respondents considered Kano a good or very good place to run a business. Respondents drew attention to the region being a major center of commerce in the north, the growing size of its market, and that materials and labor, including skilled labor, were readily available. Their optimism is reflected in a small but substantial increase in the number of workers employed by surveyed firms from 2011 to 2013, which is consistent with the national growth of manufacturing subsectors for 2010–13.

Source: Miles 2013.

Map 2.6 GDP and GDP per Capita by State, 2010



Source: Bloch, Fox, and others 2015; Data from National Bureau of Statistics 2010a.
Note: GDP = gross domestic product.

Notes

1. Analysis in this chapter on the overall composition of the national, regional, and urban economies in the formal and informal sectors, and on the emerging spatial patterns of agglomeration, is drawn from the Urbanisation Research Nigeria 2014 report *Economic Development in Urban Nigeria* by Robin Bloch, Naji Makarem, Mohammed-Bello Yunusa, Nikolaos Papachristodoulou, and Matthew Crighton.

2. The widely-disseminated McKinsey figures claim real growth in manufacturing of 13 percent from 2010 to 2013 (McKinsey 2014, 11), but our calculations show that their figures are in fact nominal not inflation-adjusted.
3. Our analysis of industrial location was conducted excluding agriculture, and mining and quarrying (including oil and gas), as the location of these sectors is to a great extent driven by natural endowments.
4. National Bureau of Statistics manufacturing employment data was altered by reducing the number of stated manufacturing workers in the state of Katsina on the basis of interviews with key informants. The data initially showed Katsina to be the largest manufacturing agglomeration, which is widely recognized by industry experts and NBS professionals, but turned out to be incorrect.
5. See Ogun (2010), Foster and Puschak (2011), World Bank Doing Business in Nigeria 2012 and 2014 surveys, African Development Bank (2013).
6. Travel demand surveys in the FCT/Abuja (2013), Kano (2012), and Lagos (2009, 2012), undertaken by the Nigeria Infrastructure Advisory Facility, funded by the U.K. Department for International Development.
7. Defined here as the Federal Capital Territory/Abuja, Aba, Benin City, Enugu, Ibadan, Ilorin, Jos, Kaduna, Kano, Lagos, Maiduguri, Ogbomosho, Onitsha, and Port Harcourt.
8. The backlog of ongoing federal road and bridge projects encompasses the Federal Ministry of Works, Federal Roads Maintenance Agency, Ministry of Niger Delta Affairs, and the Subsidy Reinvestment Program road and bridge projects.

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